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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,621	11/13/2003	Anil D. Jha	2003P86274US	2148
37462 7590 03/11/2010 LANDO & ANASTASI, LLP ONE MAIN STREET, SUITE 1100 CAMBRIDGE, MA 02142				
EXAMINER				
DRODGE, JOSEPH W				
ART UNIT		PAPER NUMBER		
1797				
NOTIFICATION DATE		DELIVERY MODE		
03/11/2010		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@ll-a.com
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Office Action Summary

Application No.

10/712,621

Applicant(s)

JHA ET AL.

Examiner

Joseph W. Drodge

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Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-29, 40-45, 51, 53, 54 and 62-69 is/are pending in the application.
- 4a) Of the above claim(s) 51, 53, 54 and 62-69 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-29 and 40-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 51, 53, 54 and 62-69 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-849)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

The indicated allowability of claims 21-29,40-45 are withdrawn in view of the newly discovered reference(s). Rejections based on the newly cited reference(s) follow.

The disclosure is objected to because of the following informalities: Concerning the Amended Paragraph beginning at page 5, line 28; Patent Application 10/712,248 should be identified as “now patent 7,083,733”.

Appropriate correction is required.

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 21-29 and 40-45, drawn to a system for treating water and distributing it to both a point of use and an auxiliary use, classified in class 210, subclass 243.
- II. Claims 51,53,54 and 62-69, drawn to a system for accumulating water at a pressure above atmospheric pressure, classified in class 204, subclass 524.

Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination I has separate utility such as in an unpressurized system. See MPEP § 806.05(d).

The examiner has required restriction between subcombinations usable together. Where applicant elects a subcombination and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional

application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and examination burden if restriction were not required because one or more of the following reasons apply:

- (a) the inventions have acquired a separate status in the art in view of their different classification;
- (b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;
- (c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);
- (d) the prior art applicable to one invention would not likely be applicable to another invention;
- (e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of an invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically

point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected invention.

If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

During a telephone conversation with Elias Domingo on March 5, 2010, a provisional election was made with traverse to prosecute the invention of Group I, claims 21-29 and 40-45. Affirmation of this election must be made by applicant in replying to this Office action. Claims 51,53,54 and 62-69 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 21,22 and 40-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Bauman patent 3,630,378.

Bauman, in the embodiment of figure 2, discloses treatment system , and corresponding method of treating water with such apparatus comprising: point of entry 12, reservoir system (tank 21), electrochemical or electrodeionization (EDI) device (22), point of use 17 & see column 4, lines 38-44 which is fluidly connected and fluidly downstream of the storage tank and auxiliary point of use 16 as 'service water' to use for flushing toilets etc. (see column 1, lines 25-29) that is fluidly connected to a waste stream (from the electrochemical device and downstream thereof, Lines (figure 2) permit recirculation through the tank. For the method claims starting with claim 40, un-desired ion species of soluble salts and hardness-causing ions are removed by the electrochemical device (column 1, lines 8-15, etc.).

For claims 22 and 41, the reservoir is at line pressure or if necessary pressurized further by booster pump (col 4, ln 58-65 etc.). The treated water is for household use (col 1, ln 23-29) for claim 42.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 23-25 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauman patent 3,630,378 in view of Sato et al patent 6,733,646 . These claims further differ by requiring pretreatment prior to passage through EDI device, including a carbon filter or reverse osmosis device, although Bauman teaches use of RO as an alternative to EDI water treatment. Sato teaches treating water for household use and pretreatment of the water by activated carbon and RO filters (see example 1). It would have been obvious to the skilled water treatment artisan to have utilized the pretreatment means of Sato in combination with use of an EDI unit, to more thoroughly remove salts and dissolved solids, including silica and boron.

Claims 23,26,27,44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauman patent 3,630,378 in view of Gadini patent 6,766,812 . Gadini also teaches pretreatment of water as required by claims 23 and 44 so as to remove impurities, sand and iron residues that could damage the EDI unit (col 15, ln 50-58); household use of EDI treated water including use in appliances such as washing machines or other water-using appliances (col 15, ln 43-47 and col 16, ln 20-25) since purified, treated water is necessary for their operation for claim 27.

Claims 26 and 45 also require the system to have a controller operable for adjusting operating parameters of the EDI device. However, Gadini teaches such control system for controlling flow rates through the system as well as voltage and power adjustments to the EDI UNIT so as to optimize EDI performance in removing water impurities (col 15, ln 1-9 and 21-34).

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bauman patent 3,630,378 in view of Hirayama patent 6,461,512. Claim 28 requires a heat exchanger thermally connected to the reservoir system. Hirayama of record teaches use of such heat exchanger HE1 upstream of a tank or reservoir that precedes an RO unit and EDI water treatment unit for the purpose of sterilizing the water and killing bacteria (col 1, ln 50-col 2, ln 21 and col 2, ln 30-38.

Claim 28 differs by requiring a heat exchanger thermally connected to the reservoir system.

Claims 29 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauman patent 3,630,378 in view of Roberts patent 4,359,789. These claims require the

auxiliary use to comprise an irrigation system. However, Roberts teaches to utilize water that has been utilized for flushing toilets, as disclosed by Bauman, or otherwise to use water of 'tertiary' quality which is normally disposed of for household irrigation needs (col 6, lines 21-51 and col 7, ln 1-10). It would have been additionally obvious to have utilized the service water either directly for irrigation purposes or to a system encompassing flushing of toilets and additionally directing of service water to irrigation, as taught by Roberts, to achieve increased water conservation and reduce water disposal needs.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Liang et al patent 5,292,422 additionally discloses in the embodiment of figure 5, to recirculate water between storage reservoir and EDI unit and to utilize treated water for domestic applications. Gallagher et al patent 5,736,023 discloses recirculation between storage reservoirs and EDI units. Kollsman patent 2,689,826 (see column 1 concerning use of electrochemically treated water for agricultural uses as well as human consumption, hence irrigation).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Drodge at his direct government telephone number of 571-272-1140. The examiner can normally be reached on Monday-Friday from approximately 8:00 AM to 1:00PM and 2:30 PM to 5:30 PM.

Alternatively, to contact the examiner, send a communication via E-mail communication to the Examiner's Patent Office E-mail address: "Joseph.Drodge@uspto.gov". Such E-mail communication should be in accordance with provisions of MPEP (Manual of Patent Examination Procedures) section 502.03 & related MPEP sections. E-mail communication must

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begin with a statement authorizing the E-mail communication and acknowledging that such communication is not secure and will be made of record, under Patent Internet Usage Policy Article 5. A suggested format for such authorization is as follows: "Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with me concerning any subject matter of this application by electronic mail. I understand that a copy of these communications will be made of record in the application file.

Additionally, the examiner's supervisor, Duane Smith, of Technology Center Unit 1797, can be reached at 571-272-1166.

The formal facsimile phone number, for official, formal communications, for the examining group where this application is assigned is 571-273-8300. The facsimile phone number for informal communication directly with the examiner is 571-273-1140.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or Public PAIR, and through Private PAIR only for unpublished applications. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JWD

3/5/2010

/Joseph W. Drodge/

Primary Examiner, Art Unit 1797

